

Dear associate editor,

Thank you for your comments again. Here are our point-to-point responses:

Comment 1:

Discussion (Section 4.1). The TA outcome from olivine was an unexpected and it is not discussed. What might have caused the unexpected low dissolution of olivine? Were there methodological differences in the preliminary trial and the experiment? How do the changes in TA observed in the preliminary trials and in the experiment compare to known olivine dissolution kinetics?

Response:

Some preliminary trials were done in bottles and differences may have occurred due to stirring. We note that in the case of the microcosm experiment, olivine was only suspended for a few days while stirring kept it more in suspension over the long timescale. We are currently drafting a paper that is fully focussed on dissolution rates on olivine based on different turbulence scenarios, which will provide the critical information (and focus) on the topic. We don't think that a discussion about data that is not of primary relevance for the findings and not at display can improve the text (but rather focus on the topic in a targeted and comprehensive paper).

To clarify we changed the abstract slightly in order to not raise expectations for too much dissolution rate data and discussion (line 19-20).

Comment 2:

L563-566: Please remove all the speculation as to what olivine OAE practitioners might do. This statement assumes that practitioners are not looking closely at dissolution dynamics in an environment that is ultimately very different from the experimental setup used here.

Response:

Thanks for your comment. We have removed these sentences (line 556-558).